Joint Tactical Radio System (JTRS)

The Joint Tactical Radio System (JTRS) is the Defense Department's transformational radio program. JTRS is a part of the Transformational Communication Architecture, which is a component of the larger Global Information Grid (GIG).

This future architecture is Department of Defense's vision for communications in a net-centric environment. JTRS supports joint operations by providing the capability to transmit and receive a variety of waveforms and networking protocols used within the radio-frequency spectrum. JTRS ensures joint operational capabilities by providing voice, video, and data services to military commanders at all echelons of the force.

JTRS is a family of affordable, high capacity, software-defined tactical radios that provide wireless, mobile, line-of-sight and beyond-line-of-sight C4I capabilities to our warfighters. The JTRS family of radios will be interoperable with legacy communication systems and capable of growth to accommodate new requirements and technologies. Relying on open-system standards, it will also be compliant with the Joint Technical Architecture and will be employed in ground mobile, airborne and maritime domains. Additionally, JTRS will feature a Wideband Networking Waveform that will provide reliable data transmission throughout the Marine Air-Ground Task Force.

JTRS capabilities are segmented into form-fit-function domains. JTRS Cluster 1, which is being developed by the Army, includes requirements for Marine and Army ground vehicles, Air Force Tactical Air Control Parties, and Army rotary-wing aviation. JTRS Cluster 2 is a limited handheld radio spiral development effort led by USSOCOM. The JTRS Airborne and Maritime/Fixed Station (AMF) program resulted from the merger of Cluster 3 (Maritime/Fixed Station) and Cluster 4 (Airborne) requirements. The JTRS AMF program will acquire JTR sets for airborne, maritime, and fixed station platforms for all services. Cluster 5 will oversee acquisition development and production of JTRS handheld and man-portable units, and forms suitable for embedment into platforms requiring a Small Form Fit (SFF) radio for the 2Mhz-2.5Ghz frequency range. Efforts are currently underway to develop future capabilities that utilize above 2Ghz waveforms to support future satellite communications requirements.

JTRS is the wireless "foundation" supporting the GIG architecture, which is essential for network-centric warfighting. JTRS will help bring the Marine Corps' core competencies of readiness, deployability, flexibility, and innovation to joint, interagency, and coalition operations. Until the much-needed JTRS capability is fielded, the Marine Corps will sustain its tactical communications infrastructure through the procurement of select radio systems that provide enhanced networking, multi-band operation, and range extension.